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The basic functional relationships between vocational education and other institutions and the sociological implications of these relationships were investigated. The analysis was organized into three sections: (1) The Social Setting of Vocational Education. Vocational education is a formalized institutional vehicle which has been introduced into modern industrial societies to facilitate youth's assumption of occupational roles. It is a formal adjunct, as are the schools themselves, to those social mechanisms which differentiate persons within the community and prescribe the type of status which they are expected to assume; (2) Contemporary Vocational Education in the United States. The vocational education program should be designed to prepare youth for a continuing program of adult education throughout life; (3) A Conceptual Approach to the Sociological Analysis of Vocational Education. To understand the social processes related to vocational education, one must understand the social functions which vocational education performs--that is, at any time it reflects the needs of the community and the needs of the individual. (CH)

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A Sociological Analysis of Vocational Education in the United States.

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A Sociological Analysis of Vocational Education

The importance of both occupations and education in American society and their complexities make a limited analysis of vocational education extremely difficult. In our discussion we hope to convey some of the basic functional relationships between vocational education and other institutions and to point out the sociological implications of these relationships. The analysis has been organized into three sections: I. The Social Setting of Vocational Education, II. Contemporary Vocational Education in the United States, and III. A Conceptual Approach to the Sociological Analysis of Vocational Education.

I.

The Social Setting of Vocational Education

Today, most reasonable persons would agree that participation in the occupational world is much more successful and satisfactory for the individual and for the community when adequate training and guidance have been provided for the entrant into the labor market. Just as the job market runs the gamut of all possible types of skills from day laborer to skilled surgeon, so too, the possible types of training and guidance exhibit a wide range. Guidance and training are as necessary for the sixteen or seventeen year old "dropout" from high school as they are for the college student uncertain about his future, often after several years of college training. But the paucity of efforts taken by communities for the guidance and training of youth and the haphazard approaches when they are taken have become more apparent as formal preparation of youth for the world of work is

increasingly viewed as a social responsibility.

How should a community go about providing for the vocational needs of its youth? And what individual or social variables should counselors use in advising and assisting youths to find a respectable place in the community?

If the allocation of jobs in our society were indeed rational, guided by an "unseen hand" in a self-equilibrating market, we might have few problems concerning youth and their placement in the world of work. But job distribution and the allocation of occupational roles is hardly a rational process. Not every available or necessary job is filled merely on request, or by pushing a button leading to an employment service. Nor is every job currently occupied by some worker necessarily being performed at maximum efficiency or at the worker's optimum job satisfaction. To be sure, in the process of job allocation in the United States, today, there is some rational allocation of jobs, and some guidance to those entering the labor force. On the other hand, there is also much waste and frustration, and more often than not neither training nor guidance.

What kind of citizens can a community produce if it has a high dropout rate from its school and trains its youth either inadequately or not at all to participate in the world of work? Are such youths likely to participate in community affairs, meeting their obligations as citizens and as parents? On the other hand, are communities with elaborate guidance and vocational education programs necessarily successful in providing their youth with fruitful adult roles in the larger community? No matter how good a program may appear to be, its ultimate test rests in the labor market, for there is a strong and direct interaction between the schools and the labor market. And

let us not underestimate those community norms which structure the labor market and influence the allocation of jobs among the socially acceptable and socially "marginal" groups in the community. Labor market, school, and community each mirror one another.

The sociologist studying vocational education in American society finds an institutionalized set of relationships complexly interwoven with many other significant institutional structures. While vocational education is, sui generis, directly related to the educational system and also the labor market, --- it is perhaps even more significantly related to the social structure of the community and the values engendered therein. There is overwhelming empirical evidence of the close relationships between the stratification system of the community and the organization and structuring of both the schools[1] and the labor market.[2]

Vocational education is a formalized institutional vehicle which has been introduced into modern industrial societies to facilitate youth's assumption of occupational roles. It is a formal adjunct, as are the schools themselves, to those social mechanisms which differentiate persons within the community and prescribe the types of statuses which they are expected to assume. To understand vocational education, then, in contemporary society, one must understand the nature of the occupational system into which vocational education provides a vehicle for entrance. Certainly a sociology of occupations must recognize the significant role which vocational education performs in the dynamics of occupational role allocation in the community. In the same vein, a sociology of education must recognize the significant bridge which education provides for youth into the world of work. Vocational education is

a nexus between the educational institution and the institutionalized labor market.

American Values Concerning Occupations and Education: The reasons communities are becoming increasingly alarmed over the problems of job placement of youth result directly from the changing industrial complex, the changing structure of the labor market, and the changing values within the community itself. So long as there is an expanding economy which is capable of absorbing new entrants into the labor force urban industrial societies find few problems concerning the vocational preparation of youth. When, however, the labor market manifests an increasing inability to absorb new entrants who do not have particular skills, vocational training, occupational guidance, and organized placement become community problems. In addition, our society no longer accepts the notion that the full brunt of labor market frictions and dislocations should fall upon the working classes. The values which now demand job training for youths and the dislocated adult workers and a full-employment have historical roots.

The basic democratic values in American society have been continuously reinforced from its birth.[3] Indeed, a young, expanding country, almost as a necessary consequence of its growth, reinforced the values of democracy, social and geographic mobility, and the ideals of economic choice and opportunity. It is embedded in these fundamental values that one finds the occupational structure, educational systems, religion, and political values and attitudes.

Americans view the maintenance of these values as an essential function of the educational system. Freedom of choice and equality of opportunity in relation to occupations mean that any child regardless of origin should be free

to choose between engineering and automobile mechanics, between barbering and the practice of medicine. Americans, therefore, expect the schools to be so organized as to enhance the possibilities of each individual's developing his maximum capacities.

Education is perceived as the mechanism through which persons move up the social ladder. Americans throughout the middle and lower strata of society aspire to have their children enjoy a "better" life than they have had and with few exceptions perceive the educational system as the means by which their children may reach a better life. Opportunity to choose a different vocation from that of one's father, and thus move to a higher status in society, is a major expectation in the American hierarchy of values.

In a broad sense, the functioning of the community in a democratic society attempts to maximize the achievement of important values for the individual while concurrently maintaining the essential functions of the community. Not all individuals can do the same types of work, nor can all occupy equal statuses. However, it is conceivable that through self-conscious, rational activities the community can facilitate both individual goal-achievement and the maximization of community goals. In this context vocational education has a crucial function to perform, today, and would, if adequately meeting the demands upon it (1) help to develop each person's abilities to the highest degree, (2) match these abilities to a satisfying job, and (3) become an integral part of an education program which helps the individual to successfully participate in the community in his role as a citizen.

Unfortunately, there has been a great deal of inertia in helping the individual move from the school system into the world of work. The inertia of the community reinforces the inertia of the schools within it. The industrial system is, by its very nature, guided by impersonal forces organized to

rationally maximize returns in the market. While it, too, has norms around which the system is organized, it is essentially organized for change. In contrast, the community and its schools are organized to a great extent not alone to pass on traditional wisdom and traditional values, but to protect tradition itself. In this respect then the schools have always lagged behind the needs of the industrial community. Formal education, while a product of relatively recent times, in many respects has resembled the types of social organizations which we identify with more static traditional societies. When vocational education is viewed in this context it becomes increasingly apparent why greater effort has not as yet been forthcoming concerning the preparation of youth for the world of work.

Vocational Education and the Social Structure: Generally, vocational education, formal preparation of youth for the world of work, is found in all societies in which there are occupational structures. But occupations are not found in all societies.[4] In primitive societies where work activity is inseparable from everyday family and community activities there are no occupations, merely family or kinship roles, based on age and sex. In contrast, occupational roles are specialized sets of work relationships performed independently of other roles. Generally, therefore, occupations are identified with market economies as contrasted with primitive or barter economies. And occupations have reached major social significance under modern industrial market societies.

One must recognize, however, that the preparation of youth for the world of work is a necessary function in every society. Among primitive peoples and those with traditional agricultural ways of life, the preparation of youth for future adult roles takes place as a matter of course through the entire socialization process. Just as youth learns to take his place in the family

and in other groups in the community, observing the customs of the group and enjoying statuses usually based upon age, sex, and kinship, so too, he learns forms of economic activity.

In our own society, with the possible exception of rapidly disappearing rural areas in which youth learn how to be farmers by working with their parents, the world of work is removed from the home and often from the immediate neighborhood. In fact, a good proportion of the life of youths is spent without any preparation for work as such and often with little familiarity with the world of work generally. A question, of course, arises as to how such extreme differences in modes of preparation of youth for economic activity could emerge for different segments of mankind. It is certainly apparent that these extremes are embedded in a broad social fabric which markedly differentiates total ways of life as well as activities identified with the economic institutions.

In primitive societies, economic activity of an individual or a group is woven into the whole fabric of social relationships. Although exchange may take place such exchanges have "more of a social than an economic significance."[5] The production of goods is for use, at a given time, and by specific persons. Economic activity is embedded in everyday life and one learns to "work" in much the same way as one learns to be a son, a father, a chief, a member of the Bear clan. "The codes which govern behavior in the society... are such that a great deal of economic cooperation is based upon a primary interest in the social aspects of cooperation for its own sake rather than in its economic advantage."[6]

The differentiating characteristics of our own society, an urban, industrial one, and the occupational system which emerges are essentially based upon

the rational structure of a market economy. This system of relationships has both an empirical and theoretical independence from such social institutions as the family and kinship systems, the church, and until recently from political or governmental systems. "Economic action involves a conscious, primary orientation to economic considerations."[7] And the ideal toward which the productive system moves is that individuals and the means of production in this rationalized economy are so organized that there is a maximization of economic output. In this modern urban industrial world, "Not blood-ties, legal compulsion, religious obligation, fealty or magic created the sociological situations which make individuals partake in economic life, but specifically economic institutions such as private enterprise and the wage system."[8]

Actually, it is the type of vocational training with which we are familiar which takes place in agencies removed from the home and often the neighborhood which is directly associated with the type of impersonal market system we identify with urban industrialism. That which is engendered in a market economy is basic to an understanding of the different modes of preparation for the world of work. Certainly, as we shall see, it is an understanding of market conditions and the social conditions which give rise to them which allows a functional explanation of patterns of preparation for work, and the relationships between work roles and community, family, educational, and associational activities. Problems which arise concerning the preparation of the youth of a nation for the world of work could only arise under certain sets of conditions. For most of man's history, no such problem has confronted any society.

The formal preparation of youth for work in institutions removed from

the family is of relatively recent origin. To be sure, forms of vocational training existed in the apprenticeship practices found in the times of Hammurabi and subsequently in Egypt, Greece, and Rome.[9] The apprenticeship practices of the guilds which we usually associate with medieval Europe, too offered forms of vocational education to youth. However, the vocational training of the medieval guilds involved relationships in the work situation and in the market place which were basically traditional, based on normative standards, and a just price. Training for the handicrafts was essentially through ascription, that is the training of son by father or father surrogate, and through a guild organization which had complete control over entrance into the trade. Ultimately, the development of industrial practices which did away with the bulk of hand activities-reducing production to machine technologies, and machine tending to the unskilled and semi-skilled, pressed countless thousands into the factories and mines and destroyed the economic and social base upon which the guild system itself rested, making obsolete most of the traditional handicraft skills.

The formal training for occupations remained for a few skilled trades and for the traditional professions which were occupational skills reserved for "gentlemen."[10] Industrial changes not only modified the structure of occupations, but created many new types of jobs from unskilled manual ones to new professions in the mechanical and scientific arts.

Who was to provide training for the new occupations? While the training of skilled workers and of the traditional professions still took place in traditional ways, there were no established patterns for training workers for the new jobs. For the most part, of course, they needed little training. When there appeared some functional necessity to train workers for new jobs

it was conceived to be a public function.

In the United States the new democracy and sectarian religious influences exerted strong pressures to provide some education for the populace. Education was considered to mean a basic training in such skills as reading, writing, and figuring. Education was neither vocational nor designed to change the masses into bourgeoisie. So long as there was a shortage of labor in the community it was unlikely that youths would be kept in school when they were needed in the factories, shops, and especially on the farms. Throughout the nineteenth century increasing industrialism, burgeoning populations, and the territorial expansion of the United States saw increased demands for trained workers in both the manual and white collar occupations, a spreading of secondary education and compulsory school attendance, higher age at entrance into the labor force, and greater community awareness of the complex social problems with which a rapidly expanding urban society has to contend.

Expanding education for a greater and greater proportion of the working classes demanded some modifications in curricula. After all, education for the masses has to be consistent with their needs and station in life. Education must be practical, preparing one to take his proper place in the community. It is against this background that the growth of both a vocational education and a guidance movement in the United States at the turn of the century becomes understandable.

Perhaps education in the United States has always been pragmatic in nature. But the practical education of the masses was quite different from the education which had been and still continues to be offered to other social groups. It is in terms of different social statuses to be subsequently enjoyed in the larger community that education in the United States as well as in

European countries is differentiated for different strata of the population. Hence the existence of dual educational traditions: education for the masses, and education for the elite.[11]

Vocational education viewed in this perspective would seem to present a clear functional relationship between the needs of the labor market and of the community and the schools. Perhaps what is more clearly presented is a functional relationship between all institutions and the stratification system of the community.

If vocational education, indeed, prepared youth for the world of work in a clear and unequivocal manner, adjusting educational curricula to the changing needs of industry, then we would have fewer problems today. In actuality, vocational education as it has developed in the United States has become more a reflecting of "appropriate" training for working-class children than a manner of meeting their subsequent vocational needs. Back in 1940, Howard M. Bell studying the problems of youth in the world of work had this to say about mass education and vocational training in the United States:

> It would be pleasant to be able to believe that the tremendous increase in the proportion of youth who are in our schools is all the result of a devotion to a splendid ideal and an unyielding determination to prepare them for effective citizenship and wholesome living. But the facts are neither so simple nor so beautiful as that. In spite of the trend toward a stationary population, we still have hundreds of thousands of young people in America who are huddled into crowded classrooms and taught by overworked and undertrained teachers. These youth are in school, not only because we accept with certain "practical" reservations the educational ideals of Thomas Jefferson but also because they have nowhere else to go.[12]
>
> In planning for education, it is vitally important, but it is not enough, to realize that the schools are gradually absorbing an increasing proportion of all the nation's youth. It is quite as important to realize that those youth are facing the problem of adjusting themselves, with a minimum of friction, to the occupational realities of an increasingly mechanized industrial civilization.[13]

II

Contemporary Vocational Education in the United States

In the previous portion of this paper we have presented a general sociological analysis of occupation and education for vocations. We now turn to a somewhat more specific examination of contemporary vocational education.

Traditionally American educators have conceived of vocational education as different from liberal, general or academic education. This distinction has served to identify different curricula and to some extent different functions of education. It should be recognized that most if not all education is related to some vocational goal in the minds of most Americans.

Although education has many other functions, national polls of American adults indicate that by far the most common expectation that Americans hold for education of their children is better jobs. This is perhaps least immediately relevant at the elementary level, but education at this stage is also related to job opportunities in the minds of many. First of all, of course, it is viewed as prerequisite to other more specifically job-related types of education. Among immigrant and transient labor groups, however, the mastery of English reading and writing and basic arithmetic skills have high value in vocational placement.

We recognize the value of general or liberal education at various levels in the American educational system, but a primary orientation toward education at the secondary, and higher education levels, is its relationship to the kind of job opportunities that such education will provide. The development of universal secondary education and the education of the ever-increasing proportions of our youth to higher levels of education have made

these levels of formal education an integral part of our complex social system. Education for constantly extended periods of years provides a foundation upon which our whole occupational structure is based. As increased division of labor and mechanization have reduced the proportion of low-skilled labors, educational prerequisites have been established for almost all occupations. In the minds of Americans, therefore, each level and type of educational program is directly related to some perception of occupational prerequisites.

In light of this perception of education, it must be recognized that those types of education which we commonly term vocational--agricultural education, trade and industrial education, business and distributive education, technical school training, and college programs directly identified with the vocational goals--form only a fraction of the total vocational education. To confine vocational education to programs which are reimbursed by the Federal government circumscribes vocational education even further.

The traditional agriculture, trade and industrial, business and distributive educational programs provided in American high schools and adult education programs prepare our citizens for only a very small proportion of the types of jobs that are now available in American society. Since these traditional vocational programs are based on a perception of some years ago, there is a tendency for these "vocational education" programs to concentrate on preparation for jobs that are declining in numbers and relative importance in the total occupational system. At the time the agricultural education program was established, farm operation was the major occupation in American society. Today only 6-7% of gainfully employed Americans are engaged in farming. Although agricultural education as well as other "vocational" programs have been modified to give training for some of the new or related occupations,

the general tendency is for this modification to lag behind the changing structure of the occupational system. To a considerable extent, therefore, traditional vocational education prepares personnel for an obsolete occupational system.

We perceive various levels of education as prerequisite to vocational assignments and many curricula at the secondary, college and graduate levels as directly oriented to particular types of jobs, but the actual careers of persons may be very slightly or not at all related to the specific training received. A Purdue University study of its engineering graduates revealed that ten years after graduation less than 10% of the engineering graduates were actually engaged in occupations designated as engineering. Although the engineering degree no doubt provided entry into a career for most of these, their promotion and transfer to other types of jobs led into a variety of fields. Persons receiving teacher education, business degrees, or many others may be found in occupations widely removed from the ones for which they received specific vocational training. This is not true, of course, of all types of vocational education. A very high proportion of medical school graduates, for example, engage in the practice of medicine or other occupations directly related to the education they received.

Many persons find themselves in occupations only indirectly related to a specific educational program. It does not follow, however, that this education has no value as preparation for the occupational world. General levels of education such as high school, college or graduate education may be prerequisite to various types of occupations. A direct one-to-one relationship, however, is seldom found between curricula and job placement. Business

executives may have had a wide range of different types of educational experience, but an ever-increasing level of education is prerequisite for such positions. Except for those occupations requiring specific licenses or certification based upon educational prerequisites, the range of educational programs leading to particular careers may be highly varied.

Occupational Trends in United States: Recognizing the direct relationship between job opportunities and vocational education, it is essential to examine briefly the occupational trends in the United States.

Recent census figures show a continuation of past labor force trends with some modifications. The proportion of employed manual workers in both the male and female labor force was less in 1960 than in 1950. This is the first relative decline in the male manual work force. The marked decline for females (21.5% to 17.1%) returns to a trend which was first reversed in 1930. The concomitant decline of semi-skilled workers in the past decade was more marked for females than for males. However, for males this is the first reversal of an upward trend in the relative proportion of semi-skilled workers in the employed labor force. As expected, the proportion of unskilled manual workers in the labor force continues to decrease. Employed male laborers, not in mines or on the farm, composed only 6.9 per cent of the total employed male labor force in 1960. Neither the proportion of skilled workers or service workers has changed appreciably during the past decade.

The proportion of white collar workers in the employed labor force continues to show a steady increase for both males and females. The increase is greater for males than for females. Of great significance is the large increase in the proportion of men in professional and technical occupations (8.7% in 1950 to 10.3% in 1960), a continuation of past trends.

The size of the labor force continues to grow as does the proportion

of women in it. Trends which have consistently upgraded the skill of the labor force in the United States remain as persistent as ever. One can only conclude that the future will offer decreasing opportunities for employment to the unskilled. Possibly those who now fall into the semi-skilled operative class of workers may find themselves displaced by a lack of semi-skilled jobs and increased technical demands made by jobs which do become available. The profound changes which are taking place in industry represent a new industrial revolution. This has been boldly described by one of the nation's influential union leaders:

> The first industrial revolution, usually identified with Watt's steam engine, replaced animal and human muscle power with steam power and electric power; it replaced the handicraft worker with the machine tender or machine operator. Automation uses control devices that result in the automatic production and processing of goods and data; it tends to replace the human regulation and control of machines and thereby changes the machine operator into a supervisor of an automatically controlled operating system.... Automation is . . . a new and revolutionary technology that is applicable to almost all, if not all, types of industrial and clerical operations. It makes possible the automatic office, as well as the automatic factory. There is a likelihood that entire departments, offices, and plants, in the major parts of the economy will be using automation equipment within the coming ten years.[14]

Education in Relation to the Changing Occupational Structure: The decline in the proportion of the labor force needed for unskilled and low-skilled occupations and the rapid change in technology have profound implications for the nature of education needed in our society. This is dramatically demonstrated by the high incidence of unemployment among those with the minimum levels of education.[15] The first implication, therefore, is the increased need for all workers to have higher levels of basic general education. Skills in reading, mathematics and other general education fields are essential for acquiring specific vocational competence and the higher levels of education

needed for many occupations. It is, therefore, essential for the schools to increase their efficiency in teaching the fundamental school subjects to all students. The early school leaver who has not acquired the basic skills is not only unable to find satisfactory permanent employment, but is also greatly handicapped in acquiring specific vocational training as an adult. Programs of adult education designed to fit the unemployed for available occupations will necessarily include adult training in the basic reading and number skills as a foundation for the specific occupational training desired. Students who fail to receive the basic education during their youth will be increasingly handicapped as adult laborers. The most valuable vocational training that can be provided in the elementary and secondary school for most youths is, therefore, in the basic education program which has not previously been identified as vocational education.

The second major implication of the changing occupational structure for education is the need for flexibility in occupational adjustment. Many occupations requiring sizeable numbers of personnel have become obsolete during the lifetime of a given generation of workers. There is no indication that the rate of change is going to decrease. On the contrary, the rate of obsolescence and development of new occupations is likely to be accelerated in the foreseeable future.[16] An increasing rather than decreasing proportion of our labor force will be faced with changing occupations in mid-career. The ease with which workers can acquire new skills and adjust to new occupations will depend to a considerable degree on the nature of their education as youths. Personnel with higher levels of general education will find the range of new occupations which they are qualified to learn much greater than those with limited general education. Flexibility of

adjustment to new and changing occupational structures will be directly correlated to the quantity and quality of general education which the labor force has acquired.

Readjustment to new occupations involves the development of a set of attitudes toward change as well as high levels of knowledge and basic academic skills. An understanding of the changing nature of the labor force and flexibility in attitudes toward work will greatly facilitate the process of retraining which will be necessary for large proportions of our working population in the years ahead. This suggests that the major part of our education for vocations should not be oriented to training for a specific occupational career. Rather, the vocational educational program should be designed to prepare youth for a continuing program of adult education throughout life. Vocational education which is designed to prepare an individual for a particular occupation before he completes his pre-service education may serve as a handicap rather than advantage to a large segment of the working force. Although workers in high-level professional jobs such as medicine, scientific research, and other fields may remain in essentially the same occupation throughout their lifetime, the rapidly changing technology in these fields also necessitates a continuing education program. Fewer workers can look forward to a life-time career in which the knowledge and skills which qualify them for a specific occupation in their youth will serve throughout their working life. An understanding of this fact and an education which prepares the individual for a continuing occupational growth and willingness to acquire new skills is probably the best vocational education that can be provided in our pre-service school program.

Relating the highly dynamic changes occurring in the labor market to the characteristics of educational institutions in our society, we are forced

to conclude that the secondary schools because of their resistances to change and the relative inflexibilities of their structures and curricula cannot provide direct vocational education for many, if not most, of the emergent occupations. Structures which are flexible, adapted to change, and able to modify programs rapidly according to both initial and retraining needs of the labor force would be most functionally suited to contemporary conditions. Such training programs might become increasingly the responsibility of private industry which might offer broadly educated individuals training for specific occupational roles through schools, on-the-job training, or some combination of these, similar to some current cooperative or apprentice programs. Or the responsibility might devolve onto the community which might increase the numbers, sizes, and scope of community colleges which could provide short-term terminal courses for both youths and adults. It is possible that vocational education in the future will be a continuous formal educational process throughout the working years for a large proportion of the labor force.

The Allocation of Personnel to Various Social Positions and Occupations: Like every other society ours requires a system of selection and allocation of personnel to fulfill the various occupational needs of the society. The increasing division of labor and technological changes has necessitated a much more complex and rational system for the selection and allocation of personnel to the wide variety of specialized occupations.

During the past few years, professional, technical and managerial people have become the largest group in the American working population. All signs point to an even greater growth of this group in the future. The large pool of unemployed persons today is predominantly composed of those with

little formal education. Job opportunities are readily available in many areas for people with higher levels of education. Our economic progress, our defense strength, and our position in the world depend on an increasing supply of highly educated people, both in quantity and in quality.

As indicated earlier, most positions in the American occupational system now have some type of educational prerequisites. A major responsibility for the allocation of persons to the various levels of occupations, therefore, rests on the educational system. This allocation function begins in the early elementary grades and continues throughout the child's school career. The accumulation of teacher evaluations and student performance largely determines the level and type of education which each child will reveive. This, in turn, structures the range of social statuses and occupations in which a person may perform as an adult. This process of allocation as performed by the school involves both the system of grading and testing and the selection of curricula in which the student receives his formal education. The grading and testing process determines to a large measure both the level of education a student is likely to receive and the curricula to which he will be assigned. The student with low grades and low aptitude and achievement test scores in the elementary school is not likely to go much beyond the minimum required level of secondary education. Such students will receive a minimum amount of general education and are likely to be guided into vocational programs which provide minimum training for occupations requiring less skill and lower educational prerequisites. In a similar fashion, students with higher grades in various elementary and secondary school subjects and comparable aptitude and achievement test scores will be guided into higher levels of education. This allocation of the educational system has become much more complicated

as a result of the ever-increasing proportion of the labor force which requires higher levels of education. Not only must a school assist in selecting mechanics and doctors by grading, promoting or failing, and counseling, but a much higher proportion must be directed into the college and graduate levels of education and allocated to the various positions requiring such education.

The overpowering need for highly educated personnel, increased by the cold war fear, has put much pressure on the educational system to improve its effectiveness in the production of such persons. Numerous responses to this demand can be identified. The National Defense Education Act's support for science, guidance, new media, and graduate education programs is one of the most evident. Others are numerous curriculum changes, special programs for the gifted and culturally deprived, return to homogeneous ability grouping, higher standards of achievement for admission to various curricula. The vastly expanded program of aptitude, interest, and achievement testing along with the expanded emphasis upon guidance and counseling, reflects the need for improving the educational system's allocation function.

One of the responses to this increasing emphasis upon the school's allocation process is the specialization of vocational curricula at various educational levels. Such curricula may not always be identified as vocational. The demand for greater emphasis upon science and mathematics at both the elementary and secondary level are clearly reflections of the need for personnel with high levels of competence in these fields in the technical and professional occupational ranges.

The current expectations of education in American society place the educator in a difficult dilemma. On the one hand, the school is expected to prepare its students for specific types of occupations. On the other hand,

the increasing general education prerequisites and the changing occupational structure make it difficult to prepare personnel for immediate occupational placement with limited education. The inclusion of specific vocational education in the secondary school curriculum reduces the opportunity for students taking such specific training to acquire the general education in science, mathematics, social science and humanities which are prerequisites for more advanced education and higher levels of vocational education. Students who are directed into a specific vocational training in trades and industrial occupations, agriculture, or other fields early in their secondary school program will find that the range of occupational statuses to which they might aspire are drastically limited. Students who postpone the specific vocational training until college undergraduate or graduate levels of education have a much wider range of occupational choices available to them. It seems likely, therefore, that both the needs of the society and the occupational adjustment of individuals will be better served if specific vocational training is provided at the latest possible period in the educational career of the individual.

Social Stratification and Allocation: As we have indicated above, the quality of school performance as reflected in grades and achievement test scores, determine to a major extent the kind of occupational opportunities and choices available to given students. It is, therefore, extremely important to recognize the well-known fact that school performance, in the early school years at least, is quite highly correlated with the occupational and educational level of the child's parents. Children from lower status families are generally handicapped in the level of school achievement until they have had an opportunity to acquire the motivation and basic skills for academic success common in the higher status families.

If a maximum freedom of choice and opportunity to choose an occupation in any strata are to be provided, children from lower strata must acquire the necessary academic skills and motivation in the school environment.

Over-zealous efficiency in allocating personnel to various occupational levels early in the educational program may drastically interfere with such freedom of choice and reduce the opportunity of many to achieve higher status position. Current practices in many schools and the extension of differentiated curricula to lower school levels tend to deny many students access to these basic values. Placement of students in differentiated curricula or tracks in the elementary and early secondary school years on the basis of achievement and aptitude test scores denies those who are placed in curricula leading to early vocational training and low-status occupations the opportunity to try for other occupations and a free choice based upon mature judgment. When differentiations in curricula are made in the early secondary or elementary years, only those students with higher test scores are given a curriculum designed to lead to high levels of education and opportunity to enter occupations requiring such education. Although the differentiation in curricula may not be so identified, it is generally understood that those with lower levels of early school achievement will be provided a curriculum which can lead only to a restricted range of occupational choices. Such students are, therefore, directed into "vocational" curricula designed to prepare them for low-skilled occupations comparatively early in their educational years. In contrast, those who go into "academic" curricula will be provided extensive periods of general education before any vocational education is inaugurated. By this program such students achieve greater maturity and a wider range of choices before occupational selection is appropriate.

It is clear that early differentiated and/or segregated education denies to many, largely from the lower social economic strata, equality of opportunity and the possibility of upward mobility. It is also apparent that any specialized vocational training or differentiated curricula leading to vocational training in the elementary or secondary school years must be evaluated in relation to the traditional and important democratic values--freedom of choice and equality of opportunity--discussed earlier, as well as to the contemporary needs of the expanding labor market.

Vocational education in the secondary school program did not seriously restrict access to these values a few decades ago. When an eighth grade or slightly higher education was the only prerequisite to most occupational levels, the establishment of vocational curricula on that base was not restrictive. Such education in the secondary school of 1920 would be comparable to specialized vocational education in the later portion of the undergraduate years or graduate school today. Since nearly all occupations now have a high school education prerequisite, specialized vocational curricula as an alternative to general education at the secondary school level restrict vocational education students to a narrow range of occupational choices and limited mobility. Certainly the boy who takes auto mechanics in a vocational high school curriculum instead of mathematics, science or humanities, will not have an equal opportunity to enter other occupations in comparison with the student who takes the latter courses.

We must also continue to recognize the fact that relatively large segments of the population are by endowment ill-equipped to acquire even the basic skills offered at the junior high and high school levels. Most of these persons are found among the dropouts from the schools and as expected constitute a large segment of the unemployed. Somehow they must be matched to the

jobs which demand low levels of skill and ability. Many jobs of this type are still found in the service industries.

Perhaps the community must expand the kinds of facilities offered to the public as, for example, in recreation and in beautifying the community through landscaping to increase the number of such jobs and still provide important benefits for the community. Work programs need not be given relief status. By increasing the number of persons employed in public undertakings respectable status and personal security may be granted to persons who could achieve neither of these through other channels.

The Self and the World of Work: Any analysis of vocational education would be inadequate without some consideration of the social-psychological aspects of the individual's relation to the world of work. The task of allocating personnel to the necessary occupational roles may be accomplished, and is in some societies, with little consideration of the individual's desires, aspirations or satisfactions on the job. Our democratic concern for the individual obliges the educator to give great emphasis to each person's self perception of his occupational role.

Even to the casual observer, vast differences in the conditions of work are readily apparent. What effect different work situations have upon given types of individuals is still the subject for empirical study. However, there are basic differences between work situations which demand great physical skills and those which demand high degrees of technical training. There are differences between work situations performed in isolation and those which bring the individual into continuous contact with others. There are different psychological outcomes between a work situation which is

hot and noisy and one which is subdued and air-conditioned. But these differences may not be the crucial variables in significantly relating an individual to his work. Perhaps the most significant factor in analyzing the social-psychological dimensions of work is to recognize the cruical importance of the job itself to most normal individuals in American society. Without an occupational status the individual has few other statuses which are capable of offering him a respected position in the community.

Occupation in American society is the most significant status-conferring role. While it is true that lowly occupations confer lowly statuses, at least they allow the individual to form some stable conception of himself and his position in the community. The significance of work in an urban industrial society must be recognized in all discussion of occupations and vocational preparation. A healthy community must have healthy citizens, and healthy citizens must have work. The job is not alone a means for subsistence--a man without work may draw subsistence from the community but his status is different from one in which he holds a respectable job.

Another crucial variable, which revolves about occupational status and the community status it confers, is the level of aspiration which the individual holds and the reference groups he uses to evaluate his own self-image. An open-class society, like that in contemporary United States, creates problems which are most intensely expressed in the labor market. While it is necessary to hold a job it is also necessary to hold the type of job which one feels is compatible with his status-seeking.

Unfortunately, status-seeking and the occupational conferral of status depends upon abilities, interests, and experience. Job aspirations are not necessarily accurate assessments of qualifications or opportunities. A crucial

variable then in vocational training and guidance rests in bringing into convergence an accurate self-image and a realistic level of aspiration.

We should also recognize the institutionalized patterns through which individuals relate themselves to their work and to their communities. A job also represents a given way of life, given values, and given identifications. It is not easy to change a textile worker into a shoe worker when friends and family are textile workers and when shoe workers represent various "out-groups" based on ethnicity, religion, or regency in the community. Occupational groups hold stereotypes of other occupations and have a hierarchy into which they place given classes of occupations.

Vocational training has to be compatible with the job expectations of the individual. Job expectations are usually class oriented and, as many studies have shown, the probability is high that sons will enter the occupational level of their fathers more than any other level. However, there are mobile individuals, and, in many ways mobile persons present the greatest problems for vocational educators. Unlike those who are immobile socially, the socially mobile are less likely to have accurate images of occupations which are beyond those held by family, relatives, or friends. In addition, the conceptions which the teacher and conselor hold of this youth are likely to be more compatible with the status of his father than of the status he has aspirations of filling. This places a great burden on the educational system. The teacher and counselor must know the student well enough to understand how he may emerge from his past as well as how he reflects it.

III
A Conceptual Approach to the Sociological Analysis of Vocational Education

The analytical approach to the sociology of vocational education is

very similar to that which one might use for a sociology of occupations. Vocational education is an historical phenomenon, a community phenomenon, an educational phenomenon, and an occupational phenomenon. To understand the social processes related to vocational education we have to understand the social functions which vocational education performs. Vocational education at any time reflects the needs of the community and the needs of the individual. Since individual self-esteem, personal adjustment, and status in the larger community are directly related in contemporary American society to the occupational structures, these crucial personal variables cannot be neglected in an analysis of the meanings of work and preparations for occupational status.

To appropriately train individuals for the world of work we must understand the nature of occupational roles themselves. Once we have adequately identified the types of vocations under discussion it is possible to identify the types and levels of training appropriate to these. Having answered the following questions about the attributes of the vocation we may be more readily prepared to rationally cope with problems of vocational education:

A. Intrinsic characteristics

1. What types of activities are involved: manual, clerical, professional?
2. What types of skills are involved: unskilled, semi-skilled, skilled, professional?
3. What types of relationships are found on the job: solitary, group, intra-organizational, inter-organizational, public, private?
4. What types of social structures in which activities take place: bureaucratic, non-bureaucratic, independent work stations, assembly line activities, service activities?

5. Physical demands of occupation and conditions of work.
6. Potential job satisfactions.
7. What is the susceptibility of the occupation to economic fluctuations or vagaries?
8. What are the economic returns to the occupation?

B. Preconditions for occupational entrance

1. What types of training are needed for entrance into the occupation?
2. What descriptive elements characterize occupational selection? Who controls entrance into the occupation and to what class of persons is entrance restricted?
3. Is there a psychological orientation or psychological type drawn to the occupation?

C. Extra-occupational variables

1. What is the prestige of the occupation relative to the occupational structure in the community?
2. Who holds the power within the occupational structure?
3. What are the boundaries around the occupation in terms of mobility into and out of the occupation?
4. What is the relationship of the occupation to other occupations or to an occupational family?

It is apparent that it is not only job skills which are involved in vocational education but attitudes, values, and life styles. In addition, the needs of the individual as he moves through the life cycle must be recognized in facilitating vocational adjustment. A recognition of social, psychological, and social-psychological variables is needed not only in pre-service vocational education but perhaps even more significantly in the

re-training of workers who have suffered from structural dislocations in the labor market.

FOOTNOTES

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